TEXAS DEPARTMENT OF STATE HEALTH SERVICES

Infectious Disease Control Unit

Epi Case Criteria Guide, 2007

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***Conditions that are specified as reportable in Texas in Title 25, Texas Administrative Code, Chapter 97, Subchapter A, Control of Communicable Diseases are in bold type.** Click on an item in the table of contents to go to the condition and on the condition code to move back.

Introduction

This document provides infectious disease information for surveillance and data entry staff. It contains a table with condition codes, condition names, and case criteria to aid in the classification and coding of conditions. It is organized alphabetically by condition name**. Conditions that are specified as reportable in Texas in Title 25, Texas Administrative Code, Chapter 97, Subchapter A, Control of Communicable Diseases are in bold type.** You can move about this document by clicking on the item in the table of contents to go to the table, on the condition codes to go to move back to the table of contents, or by selecting links between table entries.

Definition of Terms

Clinically compatible case: A clinical syndrome generally compatible with the disease, as described in the clinical description.

Confirmed case: A case that is classified as confirmed for reporting purposes.

Epidemiologically linked case: A case in which a) the patient has had contact with one or more persons who either have/had the disease or have been exposed to a point source of infection (i.e., a single source of infection, such as an event leading to a foodborne-disease outbreak, to which all confirmed case-patients were exposed) and b) transmission of the agent by the usual modes of transmission is plausible. A case may be considered epidemiologically linked to a laboratory-confirmed case if at least one case in the chain of transmission is laboratory confirmed.

Laboratory-confirmed case: A case that is confirmed by one or more of the laboratory methods listed in the case definition under Laboratory Criteria for Diagnosis. Although other laboratory methods can be used in clinical diagnosis, only those listed are accepted as laboratory confirmation for national reporting purposes.

Probable case: A case that is classified as probable for reporting purposes.

Supportive or presumptive laboratory results: Specified laboratory results that are consistent with the diagnosis, yet do not meet the criteria for laboratory confirmation.

Suspected case: A case that is classified as suspected for reporting purposes.

Condition Names, Condition Codes, Case Definition/Classification and Lab Confirmation Tests

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Amebiasis[1] 11040	Infection of the large intestine by *Entamoeba histolytica* that may result in an illness of variable severity ranging from mild, chronic diarrhea to fulminant dysentery. Infection also may be asymptomatic. Extraintestinal infection also can occur (e.g., hepatic absces) *Confirmed, intestinal amebiasis*: A clinically compatible illness that is laboratory confirmed *Confirmed, extraintestinal amebiasis:* A parasitologically confirmed infection of extraintestinal tissue, or among symptomatic persons (with clinical or radiographic findings consistent with extraintestinal infection), demonstration of specific antibody against *E. histolytica* as measured by indirect hemagglutination or other reliable immunodiagnostic test (e.g., enzyme-linked immunosorbent assay)	*Intestinal amebiasis*: ▪ Demonstration of cysts or trophozoites of *E. histolytica* in stool, or ▪ Demonstration of trophozoites in tissue biopsy or ulcer scrapings by culture or histopathology *Extraintestinal amebiasis:* ▪ Demonstration of E. histolytica trophozoites in extraintestinal tissue
Anthrax[1] 10350	An illness with acute onset characterized by several distinct clinical forms, including the following: *Cutaneous:* A skin lesion evolving during a period of 2-6 days from a papule, through a vesicular stage, to a depressed black eschar. ▪ *Inhalation:* A brief prodrome resembling a viral respiratory illness, followed by development of hypoxia and dyspnea, with radiographic evidence of mediastinal widening ▪ *Intestinal:* Severe abdominal distress followed by fever and signs of septicemia ▪ *Oropharyngeal:* Mucosal lesion in the oral cavity or oropharynx, cervical adenopathy and edema, and fever *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Isolation of *Bacillus anthracis* from a clinical specimen, or ▪ Anthrax electrophoretic immunotransblot (EITB) reaction to the protective antigen and/or lethal factor bands in one or more serum samples obtained after onset of symptoms, or ▪ Demonstration of *B. anthracis* in a clinical specimen by immunofluorescence

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive[1] *See virus-specific codes below:* *Encephalitis,* *Cache Valley* *California Serogroup* *Eastern Equine (EEE)* *Powassan* *St Louis (SLE)* *Venezuelen Equine (VEE)* *Western Equine (WEE)* *West Nile* *Dengue Fever* *Dengue Hemorrhagic Fever* *West Nile Fever* Table of Contents	Arboviral infections may be asymptomatic or may result in febrile illnesses of variable severity sometimes associated with central nervous system (CNS) involvement. When the CNS is affected, clinical syndromes include aseptic meningitis, myelitis and encephalitis, which are clinically indistinguishable from similar syndromes caused by other viruses. Arboviral meningitis is usually characterized by fever, headache, stiff neck, and pleocytosis in cerebrospinal fluid. Arboviral myelitis is usually characterized by fever and acute bulbar or limb paresis or flaccid paralysis. Arboviral encephalitis is usually characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction. Less common neurological syndromes can include cranial and peripheral neuritis or other neuropathies, including Guillain-Barré syndrome. Non-neuroinvasive syndromes caused by these usually neurotropic arboviruses can rarely include myocarditis, pancreatitis, or hepatitis. In addition, they may cause febrile illnesses (e.g., West Nile fever [WNF]) that are non-localized, self-limited illnesses with headache, myalgias, arthralgias, and sometimes accompanied by skin rash or lymphadenopathy. Laboratory-confirmed arboviral illnesses lacking documented fever can occur, and overlap among the various clinical syndromes is common. Cases of arboviral disease are classified either as neuroinvasive or non-neuroinvasive, according to the following criteria: *Neuroinvasive:* Requires the presence of fever and at least one of the following, as documented by a physician and in the absence of a more likely clinical explanation: Acutely altered mental status (e.g., disorientation, obtundation, stupor, or coma), or other acute signs of central or peripheral neurologic dysfunction (e.g., paresis or paralysis, nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, or abnormal movements); pleocytosis (increased white blood cell concentration in cerebrospinal fluid [CSF]) associated with illness clinically compatible with meningitis (e.g., headache or stiff neck) *Non-neuroinvasive*: Documented fever, as measured by the patient or clinician; absence of neuroinvasive disease (above), and; absence of a more likely clinical explanation for the illness *Confirmed*: A clinically compatible case with level one lab results *Probable:* A clinically compatible case with level two lab results	*Level One Criteria* ▪ Four-fold or greater change in virus-specific serum antibody titer, or ▪ Isolation of virus from or demonstration of specific viral antigen or genomic sequences in tissue, blood, CSF, or other body fluid, or ▪ Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA), or ▪ Virus-specific IgM antibodies demonstrated in serum by antibody-capture EIA and confirmed by demonstration of virus-specific serum immunoglobulin G (IgG) antibodies in the same or a later specimen by another serologic assay (e.g., neutralization or hemagglutination inhibition) *Level Two Criteria* ▪ Stable (less than or equal to a two-fold change) but elevated titer of virus-specific serum antibodies, or ▪ Virus-specific serum IgM antibodies detected by antibody-capture EIA but with no available results of a confirmatory test for virus-specific serum IgG antibodies in the same or a later specimen

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Aseptic meningitis 10010	A syndrome characterized by acute onset of meningeal symptoms (stiff neck, fever, and headache), cerebrospinal fluid pleocytosis (excessive lymphocytes), with no laboratory evidence of bacterial or fungal organisms. Aseptic meningitis is a syndrome of multiple etiologies, but many cases are caused by a viral agent. *Confirmed*: A clinically compatible illness diagnosed by a physician as aseptic meningitis, with no laboratory evidence of bacterial or fungal meningitis; or a viral isolate from cerebrospinal fluid; or a viral isolate from blood with a clinically compatible illness diagnosed by a physician	*Laboratory Confirmation:* ▪ A viral isolate from cerebrospinal fluid, or ▪ A viral isolate from blood with physician diagnosis of aseptic meningitis *Supportive of Clinical Diagnosis:* ▪ No growth in CSF or blood cultures ▪ CSF with test results characteristic of viral meningitis
Babesiosis[2] 12010	A potentially severe and sometimes fatal disease caused by infection with a protozoan parasite of RBCs. The clinical syndrome may include fever, chills, myalgia, fatigue, and jaundice secondary to a hemolytic anemia that may last from several days to a few months. Seroprevalence studies indicate that most infections are asymptomatic. In some cases, parasitemia without symptoms may last for months or even years. Dual infection with *Borrelia burgdorferi*, causal agent of Lyme disease, is known to occur and may increase the severity of both diseases. *Confirmed:* A clinically compatible case that is laboratory confirmed	▪ Identification of the parasite within RBCs on a thick or thin blood film or ▪ Demonstration of specific antibodies by serologic analysis (IFA babesial DNA [PCR]) or ▪ Isolation of the parasite in appropriate laboratory animals provides supportive evidence for the diagnosis
Bacterial meningitis, other 10650	Bacterial meningitis manifests most commonly with fever, headache, and a stiff neck; the disease may progress rapidly to shock and death. However, other manifestations may be observed. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable:* A clinically compatible case diagnosed by a physician as bacterial meningitis without culture confirmation	▪ Isolation of a bacterial species, fungus, or parasite from the cerebrospinal fluid or a clinically compatible case accompanied by a positive blood culture
Botulism, foodborne[1] 10530	Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly. *Confirmed*: A clinically compatible case that is laboratory confirmed or that occurs among persons who ate the same food as persons who have laboratory confirmed botulism *Probable*: A clinically compatible case with an epidemiological link	▪ Detection of botulinum toxin in serum, stool, or patient's food, or ▪ Isolation of *Clostridium botulinum* from stool

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Botulism, infant[1] 10540	An illness of infants, characterized by constipation, poor feeding, and "failure to thrive" that may be followed by progressive weakness, impaired respiration, and death. *Confirmed*: A clinically compatible case that is laboratory confirmed, occurring in a child aged less than 1 year	▪ Detection of botulinum toxin in stool or serum, or ▪ Isolation of *Clostridium botulinum* from stool
Botulism, other unspecified[1] 10548	Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly. *Confirmed*: A clinically compatible case that is laboratory confirmed in a patient aged greater than or equal to 1 year who has no history of ingestion of suspect food and has no wounds	▪ Detection of botulinum toxin in clinical specimen, or ▪ Isolation of *Clostridium botulinum* from clinical specimen
Botulism, wound[1] 10549	An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly. *Confirmed*: A clinically compatible case that is laboratory confirmed in a patient who has no suspected exposure to contaminated food and who has a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms	▪ Detection of botulinum toxin in serum, or ▪ Isolation of *Clostridium botulinum* from wound
Brucellosis[1] 10020	An illness characterized by acute or insidious onset of fever,night sweats, undue fatigue, anorexia, weight loss, headache, and arthralgia. *Confirmed*: A clinically compatible illness that is laboratory confirmed *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case or that has supportive serology (i.e., *Brucella* agglutination titer of greater than or equal to 160 in one or more serum specimens obtained after onset of symptoms)	▪ Isolation of *Brucella* spp. from a clinical specimen, or ▪ Fourfold or greater rise in *Brucella* agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart and studied at the same laboratory, or ▪ Demonstration by immunofluorescence of *Brucella* spp. in a clinical specimen
Campylobacteriosis[1] 11020	An infection that may result in diarrheal illness of variable severity. *Confirmed*: A case that is laboratory confirmed *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case	▪ Isolation of *Campylobacter* from any clinical specimen

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Cat Scratch Fever (*Bartonella henselae*)[2,3] 11820	Cat scratch disease (CSD) is a bacterial disease caused by *Bartonella henselae*. Most people with CSD have been bitten or scratched by a cat and developed a mild infection at the point of injury. Lymph nodes, especially those around the head, neck, and upper limbs, become swollen. Additionally, a person with CSD may experience fever, headache, fatigue, and a poor appetite. Rare complications of *B. henselae* infection are bacillary angiomatosis and Parinaud's oculoglandular syndrome. *Confirmed*: A case that is clinically compatible and laboratory confirmed	▪ Serological evidence of antibody to *Bartonella*. A titre of 1:64 or greater by IFA assay is considered positive
Chickenpox (See **Varicella**) Table of Contents	See Varicella	
Cholera (toxigenic *Vibrio cholerae* O1 or O139)[1] 10470	An illness characterized by diarrhea and/or vomiting; severity is variable. *Confirmed*: A clinically compatible illness that is laboratory confirmed *Comment:* Illnesses caused by strains of *V. cholerae* other than toxigenic *V. cholerae* O1 or O139 should not be reported as cases of cholera. (See additional reportable Vibrio conditions)	▪ Isolation of toxigenic (i.e., cholera toxin-producing) *Vibrio cholerae* O1 or O139 from stool or vomitus, or ▪ Serologic evidence of recent infection
Coccidioidomycosis[1] 11900	Infection may be asymptomatic or may produce an acute or chronic disease. Although the disease initially resembles an influenza-like febrile illness primarily involving the bronchopulmonary system, dissemination can occur to multiple organ systems. An illness characterized by one or more of the following: influenza-like signs and symptoms (e.g., fever, chest pain, cough, myalgia, arthralgia, and headache); pneumonia or other pulmonary lesion, diagnosed by chest radiograph; erythema nodosum or erythema multiforme rash; involvement of bones, joints, or skin by dissemination; meningitis; involvement of viscera and lymph nodes *Confirmed*: A case that meets the clinical case definition and is laboratory confirmed	▪ Cultural, histopathologic, or molecular evidence of presence of *Coccidioides immitis*, or ▪ Positive serologic test for coccidioidal antibodies in serum or cerebrospinal fluid by 1) detection of coccidiodal immunoglobulin M (IGM) by immunodiffusion, enzyme immunoassay (EIA), latex agglutination, or tube precipitin, or 2) detection of rising titer of coccidioidal immunoglobulin G (IgG) by immunodifusion, EIA, or complement fixation, or ▪ Coccidiodal skin-test conversion from negative to positive after onset of clinical signs and symptoms

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Colorado Tick Fever[2] 10093	Colorado tick fever (CTF) is an acute febrile (often diphasic) viral disease with infrequent rash. After initial onset, a brief remission is usual, followed by a second bout of fever lasting 2-3 days; neutropenia and thrombocytopenia almost always occur on the 4th to 5th day of fever. Characteristically, Colorado tick fever is a moderately severe disease, with occasional encephalitis, myocarditis or tendency to bleed. Deaths are rare. *Confirmed*: A case that meets the clinical case definition and is laboratory confirmed	▪ Isolation of Colorado Tick Fever virus from blood ▪ Antigen detection in erythrocytes by immunofluorescent testing (IF). CTF virus may persist in erythrocytes for up to 120 days. ▪ Detection of RTF-specific antibody by indirect immunofluorescent antibody testing (IFA).
Creutzfeldt-Jakob Disease (CJD)[4,5] 80060	Creutzfeldt-Jakob disease (CJD) is a brain disorder that usually occurs in people over the age of 60. Symptoms include behavioral changes, confusion, difficulty remembering recent events, and loss of feeling in the arms, legs, or face. Patients may lose their balance or seem uncoordinated — they may have difficulty walking or have muscle jerks and spasms. There is no known treatment; most people with CJD die within 3 to 12 months of diagnosis. Several types of CJD are determined based on etiology. They are: sporadic, variant, iatrogenic, familial. Neuropathological criteria for CJD and other human transmissible spongiform encephalopathies can be summarized as follows: *Creutzfeldt-Jakob disease:* Sporadic, iatrogenic (recognized risk) or familial (same disease in first degree relative or disease-associated PrP gene mutation): ◆ Spongiform encephalopathy in cerebral and/or cerebellar cortex and/or subcortical grey matter; and/or ◆ Encephalopathy with prion protein (PrP) immunoreactivity (plaque and/or diffuse synaptic and/or patchy/perivascular types) *Variant CJD:* Spongiform encephalopathy with abundant PrP deposition, in particular multiple fibrillary PrP plaque surrounded by a halo of spongiform vacuoles (florid plaques, daisy-like plaques) and other PrP plaques, and amorphous pericellular and perivascular PrP deposits especially prominent in the cerebellar molecular layer See WHO recommended case definitions for Sporadic, Iatrogenic, Familial, and Variant CJD, at *http://www.who.int/csr/resources/publications/surveillance/whocdscsrisr992.pdf*	See Case Classification criteria

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Cryptosporidiosis[1] 11580	An illness caused by the protozoan *Cryptosporidium parvum* and characterized by diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea, and vomiting. Infected persons may be asymptomatic. The disease can be prolonged and life-threatening in severely immunocompromised persons. *Confirmed, Symptomatic*: A laboratory confirmed case associated with one of the symptoms described above *Confirmed, Asymptomatic*: A laboratory confirmed case associated with none of the above symptoms	Detection—in symptomatic or asymptomatic persons of *Cryptosporidium parvum*: ▪ Oocysts in stool by microscopic examination, or in intestinal fluid or small-bowel biopsy specimens, or ▪ Oocyst or sporozoite antigens by immunodiagnostic methods, e.g., ELISA, or by PCR techniques when routinely available, or ▪ Demonstration of reproductive stages in tissue preparations
Cyclosporiasis[1] 11575	An illness of variable severity caused by the protozoan *Cyclospora cayetanensis* and commonly characterized by watery diarrhea, loss of appetite, weight loss, abdominal bloating and cramping, increased flatus, nausea, fatigue, and low-grade fever. Vomiting also may be noted. Relapses and asymptomatic infections can occur. *Confirmed:* A laboratory-confirmed case with or without clinical symptoms	Detection—in symptomatic or asymptomatic persons— of *Cyclospora*: ▪ Oocysts in stool by microscopic examination, or in intestinal fluid or small bowel biopsy specimens, or ▪ Demonstration of sporulation, or DNA (by polymerase chain reaction) in stool, duodenal/jejunal aspirates or small bowel biopsy specimens
Cysticercosis[6] (Also see ***Taenia solium***) (code not assigned yet)	Cysticercosis is an infection caused by the larval form of the pork tapeworm, *Taenia solium*. Infection occurs when the tapeworm eggs are ingested, hatch into larvae, and migrate to tissues where they form cysticerci (cysts). The symptoms of cysticercosis reflect the development of cysticerci in various sites. When cysticerci are found in the brain, the condition is called neurocysticercosis, which can cause diverse manifestations including seizures, mental disturbances, focal neurologic deficits, and signs of space-occupying intracerebral lesions. Death can occur suddenly. Extracerebral cysticercosis can cause ocular, cardiac, or spinal lesions with associated symptoms. Asymptomatic subcutaneous nodules and calcified intramuscular nodules can be encountered. Note: Also see *Taenia solium* *Confirmed:* Laboratory confirmation of the presence of cysticercus in tissue	Presumptive diagnosis of neurocysticercosis is usually made by MRI or CT brain scans. Blood tests are available to help diagnose an infection, but may not always be accurate. If surgery is necessary, confirmation of the diagnosis can be made by demonstrating the cysticercus in the tissue involved. Note: Demonstration of *Taenia solium* eggs and proglottids in the feces diagnoses taeniasis and not cysticercosis. While suggestive, it does not necessarily prove that cysticercosis is present. Persons who are found to have eggs or proglottids in their feces should be evaluated serologically since autoinfection, resulting in cysticercosis, can occur.

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Dengue Fever[1] 10680	An acute febrile illness characterized by frontal headache, retro-ocular pain, muscle and joint pain, and rash. The principal vector is the *Aedes aegypti* mosquito and transmission usually occurs in tropical or subtropical areas. Severe manifestations (e.g., dengue hemorrhagic fever and dengue shock syndrome) are rare but may be fatal. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case with supportive serologic findings (a reciprocal IgG antibody titer of greater than or equal to 1280 or a positive IgM antibody test on a single acute (late)- or convalescent-phase serum specimen to one or more dengue virus antigens)	▪ Isolation of dengue virus from serum and/or autopsy tissue samples, or ▪ Demonstration of a fourfold or greater rise or fall in reciprocal immunoglobulin G (IgG) or immunoglobulin M (IgM) antibody titers to one or more dengue virus antigens in paired serum samples, or ▪ Demonstration of dengue virus antigen in autopsy tissue or serum samples by immunohistochemistry or by viral nucleic acid detection
Dengue Hemorrhagic Fever[1] 10685	Dengue hemorrhagic fever is defined as an acute febrile illness with minor or major bleeding phenomena, thrombocytopenia (less than or equal to 100,000/mm^3), and evidence of plasma leakage documented by hemoconcentration (hematocrit increased by greater than or equal to 20%) or other objective evidence of increased capillary permeability.. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case with supportive serologic findings (a reciprocal IgG antibody titer of greater than or equal to 1280 or a positive IgM antibody test on a single acute (late)- or convalescent-phase serum specimen to one or more dengue virus antigens)	▪ Isolation of dengue virus from serum and/or autopsy tissue samples, or ▪ Demonstration of a fourfold or greater rise or fall in reciprocal immunoglobulin G (IgG) or immunoglobulin M (IgM) antibody titers to one or more dengue virus antigens in paired serum samples, or ▪ Demonstration of dengue virus antigen in autopsy tissue or serum samples by immunohistochemistry or by viral nucleic acid detection
Diphtheria[7] 10040	An upper respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose. *Confirmed*: A clinically compatible case that is either laboratory confirmed or epidemiologically linked to a laboratory-confirmed case *Probable*: A clinically compatible case that is not laboratory confirmed and is not epidemiologically linked to a laboratory-confirmed case Note: Cutaneous diphtheria should not be reported. All diphtheria isolates, regardless of association with disease, should be sent to the DSHS laboratory.	▪ Isolation of *Corynebacterium diphtheriae* from a clinical specimen, or ▪ Histopathologic diagnosis of diphtheria

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Ebola (Viral Hemmorhagic Fever)[2] 11630	Severe acute viral illness, usually with sudden onset of fever, malaise, myalgia and headache, followed by pharyngitis, vomiting, diarrhea and maculopapular rash. The accompanying hemorrhagic diathesis is often accompanied by hepatic damage, renal failure, CNS involvement and terminal shock with multi-organ dysfunction. Laboratory findings usually show lymphopenia, severe thrombocytopenia and transaminase elevation (AST>ALT), sometimxes with hyperamylasemia. *Confirmed*: A clinically compatible case with supporting laboratory evidence *Probable*: A clinically compatible illness epi-linked to a confirmed case *Suspect:* A clinically compatible illness with a history of contact with primates	▪ Diagnosis is usually through a combination of assays detecting Ebolavirus antigen or RNA and antibody IgM or IgG. RT-PCR or ELISA antigen detection can be used on blood, serum or organ homogenates (the presence of IgM antibody suggests recent infection) ▪ Virus isolation attempts in cell culture or suckling mice must be undertaken in a BSL-4 laboratory ▪ ELISA is used for Ebolavirus-specific IgM and IgG antibody detection in serum (the presence of IgM antibody suggesting recent infection) ▪ Virus may sometimes be visualized in liver, spleen, skin and other tissue sections by electron microscopy ▪ Postmortem diagnosis through immunohistochemical examination of formalin-fixed skin biopsy or autopsy specimens is possible
Ehrlichiosis, human granulocytic (HGE)[1] 11085	Tick-borne illness caused by *E. phagocytophila* characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients. *Confirmed*: A clinically compatible illness that is laboratory confirmed. *Probable*: A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes	▪ Four-fold change in antibody titer to *E. phagocytophila* antigen by IFA in paired serum samples, or ▪ Positive PCR assay and confirmation of *E. phagocytophila* DNA, or ▪ Identification of morulae in leukocytes, and a positive IFA titer to *E. phagocytophila* antigen (based on cutoff titers established by the laboratory performing the assay), or ▪ Immunostaining of *E. phagocytophila* antigen in a biopsy or autopsy sample, or ▪ Culture of *E. phagocytophila* from a clinical specimen
Ehrlichiosis, human monocytic (HME)[1] 11086	A tick-borne illness characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients. *Confirmed*: A clinically compatible illness that is laboratory confirmed. *Probable*: A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes	▪ Demonstration of a four-fold change in antibody titer to *E. chaffeensis* antigen by indirect immunofluorescence assay (IFA) in paired serum samples, or ▪ Positive polymerase chain reaction (PCR) assay and confirmation of *E. chaffeensis* DNA, or ▪ Identification of morulae in leukocytes, and a positive IFA titer to *E. chaffeensis* antigen (based on cutoff titers established by the laboratory performing the assay), or ▪ Immunostaining of *E. chaffeensis* antigen in a biopsy or autopsy sample, or ▪ Culture of *E. chaffeensis* from a clinical specimen

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Ehrlichiosis, human, other or unspecified agent[1] 11087	A tick-borne illness characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients. *Confirmed*: A clinically compatible illness that is laboratory confirmed *Probable*: A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes	▪ Demonstration of a four-fold change in antibody titer to more than one *Ehrlichia* species by IFA in paired serum samples, in which a dominant reactivity cannot be established, or ▪ Identification of an *Ehrlichia* species other than *E. chaffeensis* or *E. phagocytophila* by PCR, immunostaining, or culture
Encephalitis (Arboviral), Cache Valley[1] 10054	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis/meningitis (Arboviral), California serogroup[1] 10054	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis (Arboviral), Eastern Equine (EEE)[1] 10053	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis (Arboviral), Powassan[1] 10057	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis (Arboviral), St. Louis[1] 10051	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis (Arboviral), Venezuelan equine (VEE)[1] 10055	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Encephalitis (Arboviral), West Nile[1] 10056	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis (Arboviral), Western Equine (WEE)[1] 10052	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Encephalitis, Nonarboviral[1] 10050	Encephalitis is an inflammation of the brain, usually caused by a direct viral infection or a hypersensitivity reaction to a virus or foreign protein (including vaccine). An inflammation of the brain's covering, or meninges, is called meningitis (see Aseptic and Bacterial, Other Meningitis guides). Clinical description: An illness in which encephalitis is the major manifestation. Symptoms are due to direct invasion and replication of the infectious agent in the central nervous system, resulting in objective clinical evidence of cerebral or cerebellar dysfunction. Postinfectious (or parainfectious) encephalitis is encephalitis or meningoencephalitis that follows or occurs in combination with other viral illnesses that are not central nervous system illnesses, or after vaccine is administered. Symptoms may be due to hypersensitivity reaction. *Confirmed*: A clinically compatible illness diagnosed by a physician as primary encephalitis or a clinically compatible illness diagnosed by a physician as postinfectious (or parainfectious) encephalitis (other than the arboviral encephalitities).	Laboratory studies are important in clinical diagnosis but are not required for reporting purposes.

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Enterohemorrhagic *Escherichia coli* (EHEC) O157:H7[1] (*See* ***Escherichia coli - STEC****)* 11560 Discontinued - as of 1/1/07 reportable under 11563- *Escherichia coli*, shiga-toxin producing (STEC)	An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur. *Confirmed*: A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported. *Probable*: ▪ A clinically compatible case that is epidemiologically linked to a confirmed or probable case, or ▪ Identification of an elevated antibody titer to *E. coli* O157:H7 from a clinically compatible case *Suspect*: A case of post-diarrheal HUS or TTP (see Hemolytic uremic syndrome, postdiarrheal) See STEC	▪ Isolation of *Escherichia coli O157:H7* from a specimen
Enterohemorrhagic *Escherichia coli* (EHEC) shiga toxin+ (not serogrouped)[1] (*See* ***Escherichia coli - STEC****)* 11564 Discontinued - as of 1/1/07 reportable under 11563- *Escherichia coli*, shiga-toxin producing (STEC)	An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur and the organism may cause extraintestinal infections. *Confirmed*: A case that meets the laboratory criteria for diagnosis *Probable*: ▪ A case with isolation of *E. coli* O157 from a clinical specimen, pending confirmation of H7 or Shiga toxin production, or ▪ A clinically compatible case that is epidemiologically linked to a confirmed or probable case, or ▪ Identification of Shiga toxin in a specimen from a clinically compatible case, or ▪ Definitive evidence of an elevated antibody titer to a known EHEC serotype from a clinically compatible case See STEC	▪ Isolation of Shiga toxin-producing *E. coli* from a clinical specimen Note: In order to be classified as Enterohemmorhagic *E.coli* shiga toxin positive (not serogrouped), the *E. coli* isolate should not have been serotyped at all. If the laboratory ruled out *E. coli* O157:H7, then this isolate should be reported as EHEC shiga toxin positive (serogroup non-O157).

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Enterohemorrhagic *Escherichia coli* (EHEC) shiga toxin+ (serogroup non-O15)[1] (*See* ***Escherichia coli - STEC***) 11562 Discontinued - as of 1/1/07 reportable under 11563- *Escherichia coli*, shiga-toxin producing (STEC)	An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur. *Confirmed*: A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported *Probable*: ▪ A clinically compatible case that is epidemiologically linked to a confirmed or probable case, or ▪ Identification of Shiga toxin in a specimen from a clinically compatible case, or ▪ Identification of an elevated antibody titer to a known EHEC serotype except *E. coli* O157 from a clinically compatible case See STEC	▪ Isolation of Shiga toxin-producing *E. coli* from a clinical specimen Note: In order to be classified as Enterohemmorhagic *E.coli* shiga toxin positive (serogroup non-*E. coli* O157), the laboratory should have performed serotyping on the isolate to rule out *E. coli* O157. A Shiga toxin-producing *E. coli* isolate that is not serotyped at all should be reported as EHEC Shiga toxin positive (not serogrouped).
***Escherichia coli*, shiga-toxin producing (STEC)[1]** 11563 *This code replaces 11560, 11564, and 11562 as of 1/1/07*	An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur and the organism may cause extraintestinal infections. *Confirmed:* A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported *Probable:* A case with isolation of *E. coli* O157 from a clinical specimen, without confirmation of H antigen or Shiga toxin production, or a clinically compatible case that is epidemiologically linked to a confirmed or probable case, or identification of an elevated antibody titer to a known Shiga toxin-producing *E. coli* serotype from a clinically compatible case, or identification of Shiga toxin in a specimen from a clinically compatible case without the isolation of the Shiga toxin-producing *E. coli* (Note: this last criterion is subject to change. The current CDC definition has moved cases meeting this criterion to the "Suspect" category; however, this is under discussion.) *Suspect:* A case of postdiarrheal HUS or TTP *(*See Hemolytic uremic syndrome, postdiarrheal*).* *Note: Cases meeting the criteria for confirmed or probable STEC and HUS should be reported under each condition.)*	▪ Isolation of Shiga toxin-producing *Escherichia coli* from a clinical specimen Note: *Escherichia coli* O157:H7 isolates may be assumed to be Shiga toxin-producing; for all other *E. coli* isolates, Shiga toxin production or the presence of Shiga toxin genes must be determined to be considered STEC.

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Giardiasis[1] 11570	An illness caused by the protozoan *Giardia lamblia* and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Infected persons may be asymptomatic. *Confirmed*: A case that is laboratory confirmed *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case	▪ Demonstration of *G. lamblia* cysts in stool, or ▪ Demonstration of *G. lamblia* trophozoites in stool, duodenal fluid, or small-bowel biopsy, or ▪ Demonstration of *G. lamblia* antigen in stool by a specific immunodiagnostic test (e.g., enzyme-linked immunosorbent assay)
Granulomatous amebic meningoencephalitis (GAE)[2] 10096	Several species of *Acanthamoeba and Balamuthia mandrillaris* (leptomyxid amoebae) can invade the brain and meninges of immunocopromised individuals, probably after entry through a skin lesion and without involvement of the nasal and olfactory tissues; this causes a granulomatous disease (granulomatous amoebic encephaliits) of insidious onset and lasting from 8 days to several months. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Identification of *Acanthamoeba*, or *Balamuthia mandrillaris* or less frequently *Naegleria fowleri* organisms
Group A *Streptococcus*, invasive[1] 11710	Invasive group A streptococcal infections may manifest as any of several clinical syndromes, including pneumonia, bacteremia in association with cutaneous infection (e.g., cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft-tissue infection (e.g., myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis (i.e., puerperal fever), neonatal sepsis, and nonfocal bacteremia. *Confirmed*: A case that is laboratory confirmed	▪ Isolation of Group A *Streptococcus* (*Streptococcus pyogenes*) by culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)
Group B *Streptococcus*, invasive[8] 11715	Group B streptococcus is the most common cause of life-threatening infections, sepsis (blood infection) and meningitis (infection of the fluid and lining around the brain) in newborns. In infants, Group B Streptococcus is characterized by sepsis, respiratory distress, apnea, shock, pneumonia and meningitis, is acquired in utero or during delivery, and occurs more frequently in low birth weight infants. Group B Streptococcus, invasive disease can present in a number of different ways in adults. The most common problems in adults are: bloodstream infections, pneumonia, skin and soft-tissue infections, and bone and joint infections. Rarely in adults, group B streptococcus can cause meningitis. *Confirmed*: A case that is laboratory confirmed	▪ Isolation of group B streptococci (*Streptococcus agalactiae*) species by a culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
***Haemophilus influenzae* type b, invasive disease**[7] 10590	*Haemophilus influenzae* type b may produce any of several clinical syndromes. Only invasive manifestations, however, are reportable. These include meningitis, bacteremia/septicemia, epiglottitis, pericarditis, osteomyelitis, septic arthritis, and cellulitis. *Confirmed*: A clinically compatible case that is culture confirmed and identified specifically as *H. influenzae* type b *Probable*: A clinically compatible illness with detection of *H. influenzae* type b antigen in cerebrospinal fluid (CSF)	▪ Isolation of *H. influenzae* type b from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid)
Hantavirus infection[2] 11610	An acute zoonotic viral disease characterized by fever, myalgias and GI complaints followed by the abrupt onset of respiratory distress and hypotension. The illness progresses rapidly to severe respiratory failure and shock. An elevated hematocrit, hypoalbuminemia and thrombocytopenia are found in most cases. Renal and hemorrhagic manifestations are usually conspicuously absent except in some severe cases. *Confirmed*: A clinically compatible case with confirmatory laboratory results	Diagnosis is made by the demonstration of specific IgM antibodies by using ELISA, Western blot or strip immunoblot techniques. Most patients have IgM antibodies at the time of hospitalization. PCR analysis of autopsy or biopsy tissues and immunohistochemistry are also established diagnostic techniques in specialized laboratories.
Hantavirus pulmonary syndrome[1] 11590	Hantavirus pulmonary syndrome (HPS), commonly referred to as hantavirus disease, is a febrile illness characterized by bilateral interstitial pulmonary infiltrates and respiratory compromise usually requiring supplemental oxygen and clinically resembling acute respiratory disease syndrome (ARDS). The typical prodrome consists of fever, chills, myalgia, headache, and gastrointestinal symptoms. Typical clinical laboratory findings include hemoconcentration, left shift in the white blood cell count, neutrophilic leukocytosis, thrombocytopenia, and circulating immunoblasts. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Detection of hantavirus-specific immunoglobulin M or rising titers of hantavirus-specific immunoglobulin G, or ▪ Detection of hantavirus-specific ribonucleic acid sequence by polymerase chain reaction in clinical specimens, or ▪ Detection of hantavirus antigen by immunohistochemistry

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Hemolytic uremic syndrome, postdiarrheal (HUS)[1] 11550	Hemolytic uremic syndrome (HUS) is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal). *Confirmed*: An acute illness diagnosed as HUS or TTP that both meets the laboratory criteria and began within 3 weeks after onset of an episode of acute or bloody diarrhea *Probable*: ▪ An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks, or ▪ An acute illness diagnosed as HUS or TTP, that a) has onset within 3 weeks after onset of an acute or bloody diarrhea and b) meets the laboratory criteria except that microangiopathic changes are not confirmed *Note: See Escherichia coli, Shiga-toxin producing (STEC). Cases meeting the criteria for both conditions should be reported under each condition.*	The following are both present at some time during the illness: ▪ Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear and ▪ Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline) Note: A low platelet count can usually, but not always, be detected early in the illness, but it may then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not less than 150,000/mm3, other diagnoses should be considered.
Hepatitis A, acute[1] 10110	An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels. *Confirmed*: A case that meets the clinical case definition (if known) and is laboratory confirmed, or a case that meets the clinical case definition and occurs in a person who has an epidemiological link with a person who has laboratory-confirmed hepatitis A	▪ Immunoglobulin M (IgM) antibody to hepatitis A virus (anti- HAV) positive
Hepatitis B, acute[7] 10100	An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels. *Confirmed:* A case that is positive for IgM antibody to hepatitis B core antigen (anti-HBc) or meets the clinical case definition and is hepatitis B surface antigen (HBsAg) positive and IgM anti-HAV negative (if done)	▪ IgM antibody to hepatitis B core antigen (anti-HBc) positive, or ▪ Meets the clinical case definition and is hepatitis B surface antigen (HBsAg) positive and IgM anti-HAV negative (if done)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Hepatitis B virus infection, chronic[7] 10105	Persons with chronic hepatitis B virus (HBV) infection may have no evidence of liver disease or may have a spectrum of disease ranging from chronic hepatitis to cirrhosis or liver cancer. Persons with chronic infection may be asymptomatic. *Confirmed*: A case that is laboratory confirmed *Probable:* A case with a single HBsAg or HBeAg or HBV DNA positive lab result when no IgM anti-HBc results are available	▪ IgM anti-HBc negative (antibody to HBV core antigen), and ▪ Positive on one of the following tests: HBsAg (hepatitis B surface antigen), HBeAg (hepatitis B e antigen), or HBV DNA, or HBsAg, or HBeAg, or ▪ HBV DNA positive two times at least 6 months apart. (Any combination of these tests performed 6 months apart.)
Hepatitis B virus infection, perinatal[7] 10104	Perinatal hepatitis B in the newborn may range from asymptomatic to fulminant hepatitis. *Confirmed:* HBsAg positive in any infant aged >1 through 24 months who was born in the US or in US territories to an HBsAg-positive mother	▪ Hepatitis B surface antigen (HBsAg) positive
Hepatitis C, **acute**[1,9] 10101	An acute illness with a) discrete onset of symptoms consistent with acute viral hepatitis (e.g. anorexia, abdominal discomfort, nausea, vomiting), and b) jaundice or abnormal serum alanine aminotransferase levels (ALT level >400 IU/L). *Confirmed*: A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C *Perinatal or Infant Hepatitis C*: (birth to two years, if greater then 2 years of age please code as above) o Hep C Acute, Suspect = Any HCV Ab (EIA, RIBA) positive infant o Hep C Acute, Confirmed = Any PCR positive infant *Children should be followed-up and re-classified if needed at around 12- 18 months of age.*	▪ Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay (e.g., ≥3.8 for the enzyme immunoassays), or ▪ Recombinant immunoblot assay (HCV RIBA positive), or ▪ Nucleic acid testing for hepatitis C virus (NAT for HCV RNA positive), and ▪ IgM antibody to hepatitis A virus (IgM anti-HAV) negative (if done), and ▪ IgM antibody to hepatitis B core antigen (IgM anti-HBc) negative, or if not done, hepatitis B surface antigen (HBsAg) negative

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Hepatitis C virus infection, chronic (past or present)[1] 10106	Most HCV-infected persons are asymptomatic. However, many have chronic liver disease, which can range from mild to severe including cirrhosis and liver cancer. *Confirmed*: A case that is laboratory confirmed and that does not meet the case definition for acute hepatitis C *Probable:* A case that is anti-HCV positive by EIA and has alanine aminotranferase (ALT or SGPT) values above the upper limit of normal (if known), but the anti-HCV EIA result has not been verified by an additional more specific assay or the signal to cutoff ratio is unknown	▪ Anti-HCV positive (repeat reactive) by EIA, verified by an additional more specific assay (e.g. RIBA for anti-HCV or nucleic acid testing for HCV RNA), or ▪ HCV RIBA positive, or ▪ Nucleic acid test for HCV RNA positive, or ▪ Report of HCV genotype, or ▪ Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay (e.g., ≥3.8 for the enzyme immunoassays) as determined and posted by CDC
Hepatitis Delta co- or super-infection, acute (Hepatitis D)[1] 10102	An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels. *Confirmed*: A case that meets the clinical case definition is laboratory confirmed Note: Hepatitis D is a liver disease caused by the hepatitis D virus (HDV), a defective virus that needs the hepatitis B virus to exist. Hepatitis D virus (HDV) is found in the blood of persons infected with the virus. Symptoms include jaundice, fatigue, abdominal pain, loss of appetite, nausea, vomiting, joint pain, and dark urine. HBV-HDV co-infection may cause more severe acute disease and a higher risk (2%-20%) of developing acute liver failure compared with those infected with HBV alone. Progression to cirrhosis is believed to be more common with HBV/HDV chronic infections.	▪ HBsAg or IgM anti-HBc positive and antibody to hepatitis delta virus positive

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Hepatitis E, acute[1] 10103	Typical clinical signs and symptoms of acute hepatitis E are similar to those of other types of viral hepatitis and include abdominal pain anorexia, dark urine, fever, hepatomegaly, jaundice, malaise, nausea, and vomiting. Other less common symptoms include arthralgia, diarrhea, pruritus, and urticarial rash. The period of infectivity following acute infection has not been determined but virus excretion in stools has been demonstrated up to 14 days after illness onset. In most hepatitis E outbreaks, the highest rates of clinically evident disease have been in young to middle-age adults; lower disease rates in younger age groups may be the result of an icteric and/or subclinical HEV infection. No evidence of chronic infection has been detected in long-term follow-up of patients with hepatitis E. *Confirmed*: A case that meets the clinical case description with supportive laboratory evidence (positive IgG antibody, positive IgM antibody, or positive PCR); OR negative tests for other acute hepatitis markers and an epidemiological link to other confirmed cases or travel history to an endemic area during exposure period	No serologic tests to diagnose HEV infection are commercially available in the United States. However, several diagnostic tests are available in research laboratories, including ▪ Enzyme immunoassays ▪ Western blot assays to detect IgM and IgG ▪ Anti-HEV in serum, polymerase chain reaction tests to detect HEV RNA in serum and stool ▪ Immunofluorescent antibody blocking assays to detect antibody to HEV antigen in serum and liver
Hepatitis Non-ABC, acute[1] 10480	An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels. *Confirmed*: A case that meets the clinical case definition is laboratory confirmed	▪ Serum aminotransferase levels greater than 2.5 times the upper limit of normal, and ▪ IgM anti-HAV negative, and ▪ IgM anti-HBc negative (if done) or HBsAg negative, and anti-HCV negative (if done)
Influenza, human isolates[1],[10] 11060	The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. Symptoms of flu include: fever (usually high), headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Stomach symptoms, such as nausea, vomiting, and diarrhea, also can occur but are more common in children than adults. Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. *Confirmed:* Case that is clinically compatible and laboratory confirmed Note: See Influenza-associated pediatric mortality for reporting of Influenza-associated deaths in all persons aged <18 years.	▪ Influenza virus isolation in tissue cell culture from respiratory specimens; ▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens; ▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens; ▪ Rapid influenza diagnostic testing of respiratory specimens; ▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Influenza-associated pediatric mortality[1] 11061	An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. Influenza-associated deaths in all persons aged <18 years should be reported. A death should not be reported if: there is no laboratory confirmation of influenza virus infection; the influenza illness is followed by full recovery to baseline health status prior to death, the death occurs in a person 18 years or older; or after review and consultation there is an alternative agreed upon cause of death. *Confirmed:* A death meeting the clinical case definition that is laboratory confirmed	Laboratory testing for influenza virus infection may be done on pre- or post-mortem clinical specimens, and include identification of influenza A or B virus infections by a positive result by at least one of the following: ▪ Influenza virus isolation in tissue cell culture from respiratory specimens; ▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens; ▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens; ▪ Rapid influenza diagnostic testing of respiratory specimens; ▪ Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens; ▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera
Legionellosis[1] 10490	Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires disease, which is characterized by fever, myalgia, cough, pneumonia, and Pontiac fever, a milder illness without pneumonia. *Confirmed*: A clinically compatible case that meets at least one of the confirmatory laboratory criteria *Travel-associated:* A case that has a history of spending at least one night away from home, either in the same country of residence or abroad, in the ten days before onset of illness	▪ Isolation of any *Legionella* organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid, or ▪ Detection of *Legionella pneumophila* serogroup 1 antigen in urine using validated reagents, or ▪ Demonstration of seroconversion by a fourfold or greater rise (between paired acute and convalescent phase serum specimens) in specific serum antibody titer to *Legionella pneumophila* serogroup 1 using validated reagents

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Leishmaniasis[2] (code not assigned yet)	Leishmaniasis is a polymorphic protozoan disease of skin and mucous membranes. The disease starts with a macule then a papule that enlarges and typically becomes an indolent ulcer in the absence of bacterial infection. Lesions may be single or multiple, occasionally nonulcerative and diffuse. Lesions may heal spontaneously within weeks to months, or last for a year or more. In some individuals, certain strains can disseminate to cause mucosal lesions (espundia), even years after the primary cutaneous lesion has healed. These sequelae, which involve nasopharyngeal tissues, are characterized by progressive tissue destruction and often scanty presence of parasites and can be severely disfiguring. Recurrence of cutaneous lesions after apparent cure may occur as ulcers, papules or nodules at or near the healed original ulcer. Mode of transmission to humans is through the infective bite of female sandflies. *Confirmed:* A clinically compatible case that is laboratory confirmed	▪ Microscopic identification of the nonmotile, intracellular for (amastigote) in stained specimens from lesions, or ▪ Culture of the motile, extracellular form) promastigote) on suitable media, or ▪ An intradermal (Montenegro) test with leishmanin, an antigen derived from the promastigotes is usually positive in established disease, or ▪ Serological (IFA or ELISA) may be useful for diagnosis of mucosal leishmaniasis
Leptospirosis[1] 10390	An illness characterized by fever, headache, chills, myalgia, conjunctival suffusion, and less frequently by meningitis, rash, jaundice, or renal insufficiency. Symptoms may be biphasic. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable:* A clinically compatible case with supportive serologic findings (i.e., a *Leptospira* agglutination titer of greater than or equal to 200 in one or more serum specimens)	▪ Isolation of *Leptospira* from a clinical specimen, or ▪ Fourfold or greater increase in *Leptospira* agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart and studied at the same laboratory, or ▪ Demonstration *of Leptospira* in a clinical specimen by immunofluorescence
Listeriosis[1] 10640	In adults, invasive disease caused by *Listeria monocytogenes* manifests most commonly as meningitis or bacteremia; infection during pregnancy may result in fetal loss through miscarriage or stillbirth, or neonatal meningitis or bacteremia. Other manifestations can also be observed. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Isolation of *L. monocytogenes* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid), or ▪ In the setting of miscarriage or stillbirth, isolation of *L. monocytogenes* from placental or fetal tissue, or ▪ In the setting of infection present at birth, isolation of *L. monocytogenes* from mother's blood

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Lyme disease[1] 11080	A systemic, tickborne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The best clinical marker for the disease is the initial skin lesion (i.e., erythema migrans [EM]) that occurs in 60%-80% of patients. *Confirmed*: a) A case with a physician-diagnosed EM that is greater than or equal to 5 cm in size or b) a case with at least two late manifestations that is laboratory confirmed	▪ Isolation of *Borrelia burgdorferi* from a clinical specimen, or ▪ Demonstration of diagnostic immunoglobulin IgM or immunoglobulin G antibodies to *B. burgdorferi* in serum or cerebrospinal fluid (CSF). A two-test approach using a sensitive enzyme immunoassay or immunofluorescence antibody followed by Western blot is recommended
Malaria[1] 10130	Signs and symptoms are variable; however, most patients experience fever. In addition to fever, common associated symptoms include headache, back pain, chills, sweats, myalgia, nausea, vomiting, diarrhea, and cough. Untreated *Plasmodium falciparum* infection can lead to coma, renal failure, pulmonary edema, and death. The diagnosis of malaria should be considered for any person who has these symptoms and who has traveled to an area in which malaria is endemic. Asymptomatic parasitemia can occur among persons who have been long-term residents of areas in which malaria is endemic. *Confirmed*: An episode of microscopically confirmed malaria parasitemia in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country	▪ Demonstration of malaria parasites in blood films
Measles (rubeola)[7] 10140	An illness characterized by all of the following: a generalized rash lasting at least 3 days; a temperature $\geq$ 101.0^{o} F ($\geq$ 38.3^{o} C); and cough, coryza, or conjunctivitis. *Confirmed*: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed case *Probable*: A case that meets the clinical case definition, has noncontributory or no serologic or viral testing, and is not epidemiologically linked to a confirmed case when there is confirmed rubella activity in the community	▪ Positive serologic test for measles immunoglobulin M antibody, or ▪ Significant rise in measles antibody level by any standard serologic assay, or ▪ Isolation of measles virus from a clinical specimen

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Meningococcal disease (*Neisseria meningtidis*)[1] 10150	Meningococcal disease manifests most commonly as meningitis and/or meningococcemia that may progress rapidly to purpura fulminans, shock, and death. However, other manifestations might be observed. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case that has one of the following: evidence of *N. meningitidis* DNA using a validated polymerase chain reaction (PCR), obtained from a normally sterile site (e.g.,. blood or CSF); or evidence of N. meningitidis antigen by immunohistochemistry (IHC) on formalin-fixed tissue or latex agglutination of CSF; or clinical purpura fulminans in the absence of a positive blood culture; or a clinically compatible case with gram negative diplococci from a normally sterile site (e.g., blood or CSF)	▪ Isolation of *Neisseria meningitidis* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid)
Mumps[7] 10180	An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting greater than or equal to 2 days, and without other apparent cause. *Confirmed*: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case *Probable*: A case that meets the clinical case definition, has noncontributory or no serologic or viral testing, and is not epidemiologically linked to a confirmed or probable case	▪ Isolation of mumps virus from clinical specimen ▪ Significant rise between acute- and convalescent-phase titers in serum mumps immunoglobulin G (IgG) antibody level by any standard serologic assay, or ▪ Positive serologic test for mumps immunoglobulin M (IgM) antibody Note: An elevated serum amylase is not confirmatory for mumps
Norovirus[11] 10996	Norovirus infection usually presents as acute-onset vomiting, watery non-bloody diarrhea with abdominal cramps, and nausea. Low-grade fever also occasionally occurs, and vomiting is more common in children. Dehydration is the most common complication, especially among the young and elderly, and may require medical attention. Symptoms usually last 24 to 60 hours. Recovery is usually complete and there is no evidence of any serious long-term sequelae. Studies with volunteers given stool filtrates have shown that asymptomatic infection may occur in as many as 30% of infections, although the role of asymptomatic infection in norovirus transmission is not well understood. *Confirmed:* A clinically compatible case that is laboratory confirmed Note: Sequencing of norovirus strains found in clinical and environmental samples has greatly helped in conducting epidemiologic investigations.	▪ Polymerase chain reaction (PCR) can be used to test stool and emesis samples, as well as environmental swabs in special studies. Identification of the virus can be best made from stool specimens taken within 48 to 72 hours after onset of symptoms. Virus can sometimes be found in stool samples taken as late as 2 weeks after recovery. ▪ Direct and immune electron microscopy of fecal specimens ▪ Fourfold increase of specific antibodies in acute- and convalescent-phase blood samples Note: Enzyme-linked immunosorbent assays for detection of virus in stools have been developed but await evaluation further evaluation regarding sensitivity and specificity.

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Pertussis[7] 10190	For endemic or sporadic cases, a cough illness lasting at least 2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop," or post-tussive vomiting, without other apparent cause (as reported by a health professional). In outbreak settings, including household exposures, the case definition used can be modified to a “cough illness lasting at least 14 days.” *Confirmed:* A person with an acute cough illness of any duration who is culture positive, or who meets the case definition and is either PCR positive or is epi-linked to a laboratory confirmed case *Probable*: Meets the clinical case definition (or outbreak definition for close contacts of cases), and is not laboratory confirmed (not tested or tests are negative) nor epi-linked to a laboratory confirmed case	▪ Isolation of *Bordetella pertussis* from clinical specimen or ▪ Positive polymerase chain reaction (PCR) assay for B. pertussis Note: Because *B. pertussis* can be difficult to culture, a negative culture result does not rule out pertussis.
Plague[1] 10440	Plague is transmitted to humans by fleas or by direct exposure to infected tissues or respiratory droplets; the disease is characterized by fever, chills, headache, malaise, prostration, and leukocytosis that manifests in one or more of the following principal clinical forms: ▪ Regional lymphadenitis (bubonic plague) ▪ Septicemia without an evident bubo (septicemic plague) ▪ Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague) ▪ Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague) *Confirmed*: A clinically compatible case with confirmatory laboratory results *Probable*: A clinically compatible case with presumptive laboratory results *Suspected*: A clinically compatible case without presumptive or confirmatory laboratory results	Presumptive: ▪ Elevated serum antibody titer(s) to *Yersinia pestis* fraction 1 (F1) antigen (without documented fourfold or greater change) in a patient with no history of plague vaccination, or ▪ Detection of F1 antigen in a clinical specimen by fluorescent assay Confirmatory: ▪ Isolation of *Y. pestis* from a clinical specimen, or ▪ Fourfold or greater change in serum antibody titer to *Y. pestis* F1 antigen Note: See Yersiniosis for other *Yersinia* isolates

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Poliomyelitis, paralytic[7] 10410	Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss *Confirmed:* A case that meets the clinical case definition in which the patient has a neurological deficit 60 days after onset of initial symptoms, has died, or has unknown follow-up status *Probable*: A case that meets the clinical case definition Note: All suspected cases of paralytic poliomyelitis are reviewed by a panel of expert consultants at the Centers for Disease Control and Prevention (CDC) before final case classification occurs.	▪ Isolation of wild-type poliovirus type 1, 2, or 3 from a clinical specimen (stool or CSF)
Poliovirus infection, nonparalytic[1] 10405	Most poliovirus infections are asymptomatic or cause mild febrile disease. Poliovirus infections occasionally cause aseptic meningitis and one out of 200 infections from poliovirus type 1 results in paralytic poliomyelitis, characterized by acute onset of flaccid paralysis that is typically asymmetric and associated with a prodromal fever. Poliovirus is spread through fecal material, oral secretions, some aerosols and fomites. *Confirmed:* Poliovirus isolate identified in appropriate clinical specimen, with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory Note: This case definition applies only to poliovirus infections found in asymptomatic persons or those with mild, nonparalytic disease. Isolation of polioviruses from persons with acute paralytic poliomyelitis should continue to be reported as “paralytic poliomyelitis.”	Laboratory evidence: Polioviruses are among the most rapidly evolving of all RNA viruses. During community circulation, cVDPVs often recombine with other species C enteroviruses. Because polioviruses accumulate nucleotide changes at a constant rate of mutation (approximately 1% per year), the time of replication can be inferred from the degree of divergence. Poliovirus isolates are characterized according to their genetic properties and all vaccine-related poliovirus isolates should be evaluated by genomic sequencing to determine degree of divergence from the parent Sabin strains. In particular, sequencing should be performed on the virus capsid protein coding region (VP1) of the poliovirus genome to identify the virus as VDPV, and analysis of recombination with other polioviruses or species C enteroviruses should be determined.

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Primary Amebic Meningoencephalitis (PAM/GAE)[12] 80750	Primary amebic meningoencephalitis is usually caused by *Naegleria fowleri* and occurs in healthy children and young adults who usually have been recently swimming in fresh water. The free-living amoeboflagellate invades the brain and meninges via the nasal mucosa and olfactory nerve; it causes a typical syndrome of fulminate pyogenic meningoencephalitis (primary amoebic meningoencephalitis [PAM]) with sore throat, severe frontal headache, occasional olfactory hallucinations, nausea, vomiting, high fever, nuchal rigidity and somnolence, and death within 10 days, usually on the 5th or 6th day. Granulomatous amebic encephalitis (GAE), caused by *Acanthamoeba* spp.or less frequently *Balamuthia mandrillaris*, occurs in immunocompromised patients, who present with focal neurologic deficits. These are subacute opportunistic infections that likely spread hematogenously from pulmonary or skin lesions to the CNS. *Confirmed:* Clinical syptoms of meningoencephalitis and laboratory confirmation	▪ Identification of *Naegleria fowleri,* or less frequently *Acanthamoeba, or Balamuthia mandrillaris* organisms
Psittacosis (Ornithosis)[1] 10450	An illness characterized by fever, chills, headache, photophobia, cough, and myalgia. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case or that has supportive serology (e.g., *C. psittaci* titer of greater than or equal to 32 in one or more serum specimens obtained after onset of symptoms)	▪ Isolation of *Chlamydia psittici* from respiratory secretions, or ▪ Fourfold or greater increase in antibody against *C. psittaci* by complement fixation or microimmunofluorescence (MIF) to a reciprocal titer of greater than or equal to 32 between paired acute- and convalescent-phase serum specimens, or ▪ Presence of immunoglobulin M antibody against *C. psittaci* by MIF to a reciprocal titer of greater than or equal to 16
Q Fever[1] 10255	Acute infection: A febrile illness usually accompanied by rigors, myalgia, malaise, and retrobulbar headache. Severe disease can include acute hepatitis, pneumonia, and meningoencephalitis. Clinical laboratory findings may include elevated liver enzyme levels and abnormal chest film findings. Asymptomatic infections may also occur. Chronic infection: Potentially fatal endocarditis may evolve months to years after acute infection, particularly in persons with underlying valvular disease. A chronic fatigue-like syndrome has been reported in some Q fever patients. *Confirmed*: A clinically compatible or epidemiologically linked case that is laboratory confirmed *Probable*: A clinically compatible or epidemiologically linked case with a single supportive IgG or IgM titer. Cutoff titers are determined by individual laboratories. CDC tests for IgG with an IFA using a titer of 1:128 as the cutoff for significant antibody.	▪ Fourfold or greater change in antibody titer to *C. burnetii* phase II or phase I antigen in paired serum specimens ideally taken 3-6 weeks apart, or ▪ Isolation of *C. burnetii* from a clinical specimen by culture, or ▪ Demonstration of *C. burnetii* in a clinical specimen by detection of antigen or nucleic acid

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Rabies, animal[1] 10340	All warm-blooded animals, including humans, are susceptible to rabies. In Texas, skunks, bats, coyotes, and foxes are the most commonly infected animals. Domestic dogs, cats, and livestock usually acquire rabies infections from wild animals. Medical authorities distinguish on the basis of clinical signs, between "furious" and "dumb" rabies. In the furious variety, the "mad dog" symptoms are pronounced. The animal is irritable and will snap and bite at real or imaginary objects. It may run for miles and attack anything in its path. The animal is extremely vicious and violent. Paralysis sets in shortly, usually affecting the hind legs first. Death follows four to seven days after the onset of clinical signs. In dumb rabies, the prominent symptoms are drowsiness and paralysis of the lower jaw. The animal may appear to have a bone lodged in its throat, sometimes causing owners to force open an animal's mouth to investigate and become unwittingly exposed to rabies. Animals with dumb rabies have no tendency to roam but will snap at movement. They are completely insensitive to pain, and usually become comatose and die from three to ten days after first symptoms appear. *Confirmed*: A case that is laboratory confirmed	▪ A positive direct fluorescent antibody test (preferably performed on central nervous system tissue) ▪ Isolation of rabies virus (in cell culture or in a laboratory animal)
Rabies, human[1] 10460	Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Detection by direct fluorescent antibody of viral antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck), or ▪ Isolation (in cell culture or in a laboratory animal) of rabies virus from saliva, cerebrospinal fluid (CSF), or central nervous system tissue, or ▪ Identification of a rabies-neutralizing antibody titer greater than or equal to 5 (complete neutralization) in the serum or CSF of an unvaccinated person

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Relapsing fever[2] 10845	A systemic spirochetal disease in which periods of fever lasting 2-9 days alternate with afebrile periods of 2-4 days; the number of relapses varies from 1 to 10 or more. Each febrile period terminates by crisis. The total duration of the louseborne disease averages 13-16 days; the tickborne disease usually lasts longer. Transitory petechial rashes are common during the initial febrile period. The overall case-fatality rate in untreated cases is between 2% and 10%. *Confirmed*: A clinically compatible case that is laboratory confirmed	Diagnosis is made by demonstration of the infectious agent (*Borrelia* spp) in dark-field preparations of fresh blood or stained thick or thin blood films, by intraperitoneal inoculation of laboratory rats or mice with blood taken during the febrile period or by blood culture in special media.
Reye syndrome[1] 11030	An illness that meets all of the following criteria: ▪ Acute, noninflammatory encephalopathy that is documented clinically by a) an alteration in consciousness and, if available, b) a record of the CSF containing less than or equal to 8 leukocytes/cu.mm or a histologic specimen demonstrating cerebral edema without perivascular or meningeal inflammation ▪ Hepatopathy documented by either a) a liver biopsy or an autopsy considered to be diagnostic of Reye syndrome or b) a threefold or greater increase in the levels of the serum glutamic- oxaloacetic transaminase (SGOT), serum glutamic-pyruvic transaminase (SGPT), or serum ammonia ▪ No more reasonable explanation for the cerebral and hepatic abnormalities *Confirmed*: A case that meets the clinical case definition	Not applicable, see Case Definition/Case Classification
Rheumatic Fever[1] 11050	An inflammatory illness that occurs as a delayed sequela of group A streptococcal infection *Major criteria:* carditis, polyarthritis, chorea, subcutaneous nodules, and erythema marginatum *Minor criteria*: previous rheumatic fever or rheumatic heart disease, arthralgia, fever, elevated erythrocyte sedimentation rate, positive C-reactive protein, or leukocytosis and prolonged PR interval on an electrocardiogram *Confirmed:* An illness characterized by a) two major criteria or one major and two minor criteria (as described in Clinical Description) and b) supporting evidence of preceding group A streptococcal infection	No specific laboratory test exists for the diagnosis of rheumatic fever

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Rocky Mountain spotted fever[1] 10250	Rocky Mountain spotted fever (RMSF) is an illness caused by *Rickettsia rickettsii*, a bacterial pathogen transmitted to humans through contact with ticks. *Dermacentor* species of ticks are most commonly associated with infection, including *Dermacentor variabilis* (the American dog tick) and *Dermacentor andersoni* (the Rocky Mountain wood tick). Disease onset averages one week following a tick bite. Age specific illness is highest for children. Illness is characterized by acute onset of fever, and may be accompanied by headache, malaise, myalgia, nausea/vomiting, or neurologic signs; a macular or maculopapular rash is reported in most patients, and a rash is often present on the palms and soles. RMSF is fatal in approximately 20% of untreated cases, and severe fulminant disease is possible. *Confirmed*: Fourfold or greater rise in antibody titer to *Rickettsia rickettsii* antigen by IFA, complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – or convalescent – phase specimens ideally taken at least 3 weeks apart, OR positive PCR assay to *R. rickettsii*, OR demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), OR isolation of *R. rickettsii* from clinical specimen Probable: Clinically compatible case with a single IFA serologic titer of >128 or a single CF of >16 or other supportive serology (fourfold rise in titer or a single titer >128 by an LA, IHA, or MA test)	▪ Serological evidence of a significant change in serum antibody titer reactive with *Rickettsia rickettsii* antigens between paired serum specimens, as measured by a standardized assay conducted in a commercial, state, or reference laboratory, or ▪ Demonstration of *R. rickettsii* antigen in a clinical specimen by immunohistochemical methods, or ▪ Detection of *R. rickettsii* DNA in a clinical specimen by the polymerase chain reaction (PCR assay), or ▪ Isolation of *R. rickettsii* from a clinical specimen in cell culture Note: For confirmed cases, a significant change in titer must be determined by the testing laboratory; examples of commonly used measures of significant change include, but are not limited to, a four-fold or greater change in antibody titer as determined by indirect immunoflourescent antibody (IFA) assay or an equivalent change in optical density measured by enzyme-linked immunosorbent assay (EIA or ELISA).
Rubella[7] 10200	An illness that has all the following characteristics: Acute onset of generalized maculopapular rash, and temperature ≥99°F (37.2 °C), if measured, and arthralgia/arthritis, lymphadenopathy, or conjunctivitis. *Confirmed*: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a laboratory confirmed case *Probable*: A case that meets the clinical case definition, has no or noncontributory serologic or virologic testing, and is not epidemiologically linked to a laboratory-confirmed case	▪ Isolation of rubella virus, or ▪ Significant rise between acute- and convalescent-phase titers in serum rubella immunoglobulin G antibody level by any standard serologic assay, or ▪ Positive serologic test for rubella immunoglobulin M (IgM) antibody

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Rubella, congenital syndrome[7] 10370	An illness of newborns resulting from rubella infection *in utero* and characterized by signs or symptoms from the following categories: (a) Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus, peripheral pulmonary artery stenosis), hearing loss, pigmentary retinopathy (b) Purpura, splenomegaly, jaundice, microcephaly, mental retardation, meingoencephalitis, and radiolucent bone disease *Probable*: A case that is not laboratory confirmed and that has any two complications listed in "a" of the clinical case definition or one complication from paragraph "a" and one from "b", and lacks evidence of any other etiology *Confirmed*: A clinically consistent case that is laboratory confirmed	▪ Isolation of rubella virus, or ▪ Demonstration of rubella-specific immunoglobulin M (IgM) antibody, or ▪ Infant rubella antibody level that persists at a higher level and for a longer period than expected from passive transfer of maternal antibody (i.e., rubella titer that does not drop at the expected rate of a twofold dilution per month), or ▪ Detection of rubella virus by polymerase chain reaction (PCR)
Salmonellosis[1] 11000	An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections may occur, and the organism may cause extraintestinal infections. *Confirmed*: A case that is meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case	▪ Isolation of *Salmonella* (except *S. Typhi*)* from a clinical specimen **S. Typhi* is reportable as Typhoid Fever
Scarlet Fever[1,13] 11581	Scarlet fever is a disease caused by Group A *Streptococcus*. It is a rash that sometimes follows strep throat. The rash is usually seen in children under the age of 18. The most common symptoms of scarlet fever are: A rash first appears as tiny red bumps on the chest and abdomen. This rash may then spread all over the body. It looks like a sunburn and feels like a rough piece of sandpaper. It is usually redder in the arm pits and groin areas. The rash lasts about 2-5 days. After the rash is gone, often the skin on the tips of the fingers and toes begins to peel. The face is flushed with a pale area around the lips. The throat is very red and sore. It can have white or yellow patches. Fever of 101^{O} degrees F (38.3 ^{O} C) or higher is common. Chills are often seen with the fever. Glands in the neck are often swollen. A whitish coating can appear on the surface of the tongue. The tongue itself looks like a strawberry because the normal bumps on the tongue look bigger. *Confirmed:* A clinically compatible case *with or without a laboratory confirmed Group A* Strep *infection*	▪ Positive rapid antigen detection of Group A *Streptococcus*, or ▪ Isolation of group *A Streptococcus*

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Severe acute respiratory syndrome (SARS)[14,15] 88730	Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). In general, SARS begins with a high fever (temperature greater than 100.4°F [>38.0°C]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia. ***Clinical Criteria:*** *Early illness:* Presence of two or more of the following features: fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, rhinorrhea. *Mild-to-moderate respiratory illness:* Temperature of >100.4º F (>38º C) 1 and one or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, difficulty breathing). *Severe respiratory illness:* Meets clinical criteria of mild-to-moderate respiratory illness, AND one or more of the following findings: radiographic evidence of pneumonia, OR acute respiratory distress syndrome, OR autopsy findings consistent with pneumonia or acute respiratory distress syndrome without an identifiable cause. ***Epidemiologic Criteria:*** *Possible exposure to SARS-associated coronavirus (SARS-CoV):* One or more of the following exposures in the 10 days before onset of symptoms: travel to a foreign or domestic location with documented OR suspected recent transmission of SARS-CoV 2, OR close contact with a person with mild-to-moderate or severe respiratory illness and with history of travel in the 10 days before onset of symptoms to a foreign or domestic location with documented or suspected recent transmission of SARS-CoV 2. *Likely exposure to SARS-CoV:* One or more of the following exposures in the 10 days before onset of symptoms: close contact3 with a confirmed case of SARS-CoV disease, or close contact3 with a person with mild-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed case of SARS-CoV disease in the 10 days before onset of symptoms *Confirmed case of SARS-CoV disease*: A person who has a clinically compatible illness (i.e., early, mild-to-moderate, or severe) that is laboratory confirmed *Probable case of SARS-CoV disease:* A person who meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for likely exposure to SARS-CoV	Laboratory confirmation of SARS-CoV infection is based on: ▪ Detection of any of the following by a validated test, with confirmation in a reference laboratory: ▪ Serum antibodies to SARS-CoV in a single serum specimen, or ▪ A four-fold or greater increase in SARS-CoV antibody titer between acute- and convalescent-phase serum specimens tested in parallel, or ▪ Negative SARS-CoV antibody test result on acute-phase serum and positive SARS-CoV antibody test result on convalescent-phase serum tested in parallel, or ▪ Isolation in cell culture of SARS-CoV from a clinical specimen, with confirmation using a test validated by CDC, or ▪ Detection of SARS-CoV RNA by RT-PCR validated by CDC, with confirmation in a reference laboratory, from two clinical specimens from different sources, or two clinical specimens collected from the same source on two different days

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Shigellosis[1] 11010	An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections may occur. *Confirmed*: A case that meets the laboratory criteria for diagnosis. When available, O antigen serotype characterization should be reported *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case	▪ Isolation of *Shigella* from a clinical specimen
Smallpox[1] 11800	An illness with acute onset of fever ≥101º F (≥38.3 º C) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause. Clinically consistent cases are those presentations of smallpox that do not meet this classical clinical case definition: a) hemorrhagic type, b) flat type, and c) *variola sine eruptione*.. *Confirmed:* A case of smallpox that is laboratory confirmed, or a case that meets the clinical case definition that is epidemiologically linked to a laboratory confirmed case *Probable:* A case that meets the clinical case definition, or a clinically consistent case that does not meet the clinical case definition and has an epidemiological link to a confirmed case of smallpox *Suspected:* A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days *Exclusion Criteria: A case may be excluded as a suspect or probable smallpox case if an alternative diagnosis fully explains the illness or appropriate clinical specimens are negative for laboratory criteria for smallpox.*	▪ Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, or ▪ Isolation of smallpox (variola) virus from a clinical specimen (Level D laboratory only; confirmed by variola PCR)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Staphylococcus aureus, coagulase-positive, methicillin-or oxicillin-resistant (MRSA)[1] 11661	Infection with oxacillin or methicillin resistant strain of *Staphylococcus aureus*. *Confirmed*: A case that is laboratory confirmed	▪ Isolation of *Staphylococcus aureus* that shows resistance to oxacillin, cefoxitin*, or methicillin by a reliable culture methodology, from a clinical specimen ▪ Nucleic acid amplification tests, such as the polymerase chain reaction (PCR), can be used to detect the mecA gene, which mediates oxacillin resistance in staphylococci ▪ *Note: Methicillin is no longer commercially available in the United States. Oxacillin maintains its activity during storage better than methicillin and is more likely to detect heteroresistant strains. However, cefoxitin is an even better inducer of the mecA gene and disk diffusion tests using cefoxitin give clearer endpoints and are easier to read than tests with oxacillin.
***Staphylococcus aureus*, coagulase- positive, vancomycin resistant (VRSA)**[1] 11665	*Staphylococcus aureus* can produce a variety of syndromes with clinical manifestations including skin and soft tissue lesions, empyema, pyarthrosis, bloodstream infection, pneumonia, osteomyelitis, septic arthritis, endocarditis, sepsis, and meningitis. *Confirmed:* A clinically compatible case of vancomycin- resistant *Staphylococcus aureus* that is laboratory-confirmed (MIC: > 16 µg/ml)	▪ Isolation of *Staphylococcus aureus* from any body site, and high-level resistance of the *Staphylococcus aureus* isolate to vancomycin, detected and defined according to CLSI (formerly NCCLS) approved standards and recommendations (MIC: ≥16 µg/ml)
***Staphylococcus aureus*, vancomycin intermediate susceptibility (VISA)**[1] 11663	*Staphylococcus aureus* can produce a variety of syndromes with clinical manifestations including skin and soft tissue lesions, empyema, pyarthrosis, bloodstream infection, pneumonia, osteomyelitis, septic arthritis, endocarditis, sepsis, and meningitis. *Confirmed:* A clinically compatible case of vancomycin- resistant *Staphylococcus aureus* that is laboratory-confirmed (MIC: 4-8 µg/ml)	▪ Isolation of *Staphylococcus aureus* from any body site, and intermediate-level resistance of the *Staphylococcus aureus* isolate to vancomycin, detected and defined according to CLSI (formerly NCCLS) approved standards and recommendations (MIC: 4-8 µg/ml)
Streptococcus*, Group A, invasive** (*Streptococcus pyogenes*) See **Group A *Strep[1]	See Group A *Streptococcus*, invasive	▪ See Group A Streptococcus, invasive

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Streptococcus*, Group B, invasive** *(Streptococcus agalactiae)* (See **Group B *Strep) 11715	See Group B *Streptococcus*, invasive	See Group B Streptococcus, invasive
Streptococcus, other, invasive, beta-hemolytic (non-group A, non-group B)[16,17,18,19] 11716	Non-A, non-B beta-hemolytic *Streptococcus* consists primarily of Group C and G *Streptococcus*. There are four different classification systems for *Streptococcus*. Clinical (pyogenic, oral, enteric), hemolysis (alpha-hemolysis, beta-hemolysis, gamma-hemolysis), serological (Lancefield: A-H and K-U), and biochemical (physiological). Lancefield groups A, B, C, and G are typically beta-hemolytic. Of these, only invasive group A and B are reportable in Texas. *Streptococcus pneumoniae*, which is also reportable, is alpha-hemolytic. Streptococcus group C can be found as normal human flora. It has also been associated with various infections, including sinusitis, pharyngitis, meningitis, pneumonia, intra-abdominal abscesses, endocarditis, osteomyelitis, toxic shock syndrome-like illness, and primary bacteremia. Large colony-forming group G β-hemolytic streptococci (GGS) were first isolated in patients with puerperal sepsis. GGS are known to be commensals and pathogens in domestic animals. In humans, they may colonize the pharynx, skin, gastrointestinal and female genital tract. In recent years, GGS have been reported with increasing frequency as the cause of a variety of human infections, such as pharyngitis, cellulitis, meningitis, endocarditis, and sepsis. Bacteremia attributable to GGS has been related to underlying conditions, such as alcoholism, diabetes mellitus, malignancy, intravenous substance abuse, or breakdown of the skin. *Confirmed*: A case that is laboratory confirmed	▪ Isolation of non-group A, non-group B *Streptococcus* by a culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Streptococcus pneumoniae, invasive, drug-resistant[1] 11720	*Streptococcus pneumoniae* causes many clinical syndromes, depending on the site of infection (e.g., acute otitis media, pneumonia, bacteremia, or meningitis). *Confirmed: A* clinically compatible case that is laboratory confirmed *Probable:* A clinically compatible case caused by laboratory-confirmed culture of S. pneumoniae identified as "nonsusceptible" (i.e., an oxacillin zone size of less than 20 mm) when oxacillin screening is the only method of antimicrobial susceptibility testing performed	▪ Isolation of *S. pneumoniae* from a normally sterile site (e.g., blood, cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid), that is "nonsusceptible" (i.e., intermediate- or high-level resistance of the *S. pneumoniae* isolate to at least one antimicrobial agent currently approved for use in treating pneumococcal infection)
Streptococcus pneumoniae, invasive disease[1] 11717	*Streptococcus pneumoniae* causes many clinical syndromes, depending on the site of infection (e.g., pneumonia, bacteremia, or meningitis). *Confirmed:* A clinically compatible case caused by laboratory confirmed culture of *S. pneumoniae* from a normally sterile site	▪ Isolation of *S. pneumoniae* from a normally sterile site (e.g., blood, cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)
***Taenia solium* and undifferentiated *Taenia* infection**[6] (Also see **Cysticercosis**) (code not assigned yet)	Taeniasis is an intestinal infection with the adult stage of the pork (*Taenia solium*) or beef (*Taenia saginata*) tapeworms. Clinical manifestations of infection with adult worm, if present, are variable and may include nervousness, insomnia, anorexia, weight loss, abdominal pain and digestive disturbances; many infections are asymptomatic. Taeniasis is usually a nonfatal infection, but the larval stage of *T. solium* may cause fatal cysticercosis. Note: Also see Cysticercosis *Confirmed:* Laboratory confirmation of the presence of *T. solium* proglottids, eggs, or antigens in a clinical specimen *Probable:* Laboratory confirmation of the presence of undifferentiated *Taenia* spp. tapeworm proglottids or eggs in a clinical specimen.	Infection with an adult tapeworm is diagnosed by identification of proglottids (segments), eggs or antigens of the worm in the feces or on anal swabs. Eggs of *T. Solium* and *T. saginata* cannot be differentiated morphologically. Specific diagnosis is based on the morphology of the scolex (head) and/or gravid proglottids.
Tetanus[7] 10210	Acute onset of hypertonia and/or painful muscular contractions (usually of the muscles of the jaw and neck) and generalized muscle spasms without other apparent medical cause. *Confirmed*: A clinically compatible case, as reported by a health-care professional	None

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Streptococcal Toxic-shock syndrome[1] 11700	Streptococcal toxic-shock syndrome (STSS) is a severe illness associated with invasive or noninvasive group A streptococcal infection. An illness with the following clinical manifestations occurring within the first 48 hours of hospitalization or, for a nosocomial case, within the first 48 hours of illness: 1) Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years. 2) Multi-organ involvement characterized by two or more of the following: *Renal Impairment*: Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 µmol/L) for adults or greater than or equal to twice the upper limit of normal for age. In patients with preexisting renal disease, a greater than twofold elevation over the baseline level; *Coagulopathy*: Platelets less than or equal to 100,000/mm3 (less than or equal to 100 x 106/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products; *Liver Involvement*: Alanine aminotransferase, aspartate aminotransferase, or total bilirubin levels greater than or equal to twice the upper limit of normal for the patient's age. In patients with preexisting liver disease, a greater than twofold increase over the baseline level; *Acute Respiratory Distress Syndrome*: Defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure or by evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia; A generalized erythematous macular rash that may desquamate; Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene. *Confirmed:* A case that meets the clinical case definition and with isolation of group A *Streptococcus* from a normally sterile site *Probable:* A case that meets the clinical case definition in the absence of another identified etiology for the illness and with isolation of group A *Streptococcus* from a nonsterile site	▪ Isolation of group A *Streptococcus* by culture from a clinical specimen

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Toxic-shock syndrome, Staphylococcal[1] 10520	An illness with the following clinical manifestations: *1) Fever*: *temperature greater than or equal to 102.0°F (greater than or equal to 38.9°C); 2*) *Rash*: diffuse macular erythroderma; *3) Desquamation*: 1-2 weeks after onset of illness, particularly on the palms and soles; *4) Hypotension*: systolic blood pressure less than or equal to 90 mm Hg for adults or less than fifth percentile by age for children aged less than16 years; orthostatic drop in diastolic blood pressure greater than or equal to 15 mm Hg from lying to sitting, orthostatic syncope, or orthostatic dizziness; *5) Multisystem involvement* (three or more of the following): *Gastrointestinal*: vomiting or diarrhea at onset of illness; *Muscular*: severe myalgia or creatine phosphokinase level at least twice the upper limit of normal; *Mucous membrane*: vaginal, oropharyngeal, or conjunctival hyperemia; *Renal*: blood urea nitrogen or creatinine at least twice the upper limit of normal for laboratory or urinary sediment with pyuria (greater than or equal to 5 leukocytes per high-power field) in the absence of urinary tract infection; *Hepatic*: total bilirubin, alanine aminotransferase enzyme, or asparate aminotransferase enzyme levels at least twice the upper limit of normal for laboratory; *Hematologic*: platelets less than 100,000/mm3; *Central nervous system*: disorientation or alterations in consciousness without focal neurologic signs when fever and hypotension are absent. *Confirmed*: A case which meets the laboratory criteria and in which all five of the clinical findings described above are present, including desquamation, unless the patient dies before desquamation occurs *Probable*: A case which meets the laboratory criteria and in which four of the five clinical findings described above are present	▪ If obtained, negative result for blood, throat, or cerebrospinal fluid cultures (except blood culture may be positive for *Staphylococcus aureus*) ▪ No rise in titer to Rocky Mountain spotted fever, leptospirosis, or measles

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Toxoplasmosis[2,20] 12020	A systemic coccidian protozoan disease; infections are frequently asymptomatic or present as an acute disease with only lymphadenopathy, or one resembling infectious mononucleosis, with fever, lymphadenopathy and lymphocytosis persisting for days or weeks. *Toxoplasma* cysts remain in tissues and may reactivate if the immune system becomes compromised. Among immunocompromised individuals, including HIV infected patient, primary or reactivated infection may cause a maculopapular rash, generalized skeletal muscle involvement, cerebritis, chorioretinitis, pneumonia, myocarditis, and/or death. Cerebral toxoplasmosis is a frequent component of AIDS. During early pregnancy, a primary infection (or rarely a reactivation in an immunosuppressed woman) may lead to fetal infection with death of the fetus or manifestations such as chorioretinitis, brain damage with intracerebral calcification, hydrocephaly, microcephaly, fever, jaundice, rash, hepatospleanomegaly, xanthochromic CSF and convulsions at birth or shortly thereafter. Later in pregnancy, maternal infection results in mild or subclinical fetal disease with delayed manifestations such as recurrent or chronic chorioretinitis. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Observation of parasites in patient specimens, such as bronchoalveolar lavage material from immunocompromised patients, or lymph node biopsy ▪ Isolation of parasites from blood or other body fluids, by intraperitoneal inoculation into mice or tissue culture- The mice should be tested for the presence of *Toxoplasma* organisms in the peritoneal fluid 6 to 10 days post inoculation; if no organisms are found, serology can be performed on the animals 4 to 6 weeks post inoculation. ▪ Detection of parasite genetic material by PCR, especially in detecting congenital infections in utero ▪ Serologic testing o Rising antibody levels are corroborative of active infection o The presence of specific IgM and/or rising IgG titers in sequential sera of infants is conclusive evidence of congenital infection
Trichinosis[1] 10270	A disease caused by ingestion of *Trichinella* larvae. The disease has variable clinical manifestations. Common signs and symptoms among symptomatic persons include eosinophilia fever, myalgia, and periorbital edema. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Demonstration of *Trichinella* larvae in tissue obtained by muscle biopsy, or ▪ Positive serologic test for *Trichinella*

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Tularemia[1] 10230	Clinical diagnosis is supported by evidence or history of a tick or deerfly bite, exposure to tissues of a mammalian host of *Francisella tularensis*, or exposure to potentially contaminated water. An illness characterized by several distinct forms, including the following: ▪ Ulceroglandular: cutaneous ulcer with regional lymphadenopathy ▪ Glandular: regional lymphadenopathy with no ulcer ▪ Oculoglandular: conjunctivitis with preauricular lymphadenopathy ▪ Oropharyngeal: stomatitis or pharyngitis or tonsillitis and cervical lymphadenopathy ▪ Intestinal: intestinal pain, vomiting, and diarrhea ▪ Pneumonic: primary pleuropulmonary disease ▪ Typhoidal: febrile illness without early localizing signs and symptoms *Confirmed*: A clinically compatible case with confirmatory laboratory results *Probable*: A clinically compatible case with laboratory results indicative of presumptive infection	Presumptive: ▪ Elevated serum antibody titer(s) *to F. tularensis* antigen (without documented fourfold or greater change) in a patient with no history of tularemia vaccination, or ▪ Detection of *F. tularensis* in a clinical specimen by fluorescent assay Confirmatory: ▪ Isolation of *F. tularensis* in a clinical specimen, or ▪ Fourfold or greater change in serum antibody titer to *F. tularensis* antigen
Typhoid fever (caused by *Salmonella* Typhi)[1] 10240	An illness caused by *Salmonella* Typhi that is often characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and nonproductive cough. However, many mild and atypical infections occur. Carriage of *S.* Typhi may be prolonged. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case that is epidemiologically linked to a confirmed case in an outbreak	▪ Isolation of *S.* Typhi from blood, stool, or other clinical specimen Note: See Salmonellosis for other *Salmonella* isolates

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Typhus fever, (endemic fleaborne, Murine)[2] 10260	Murine typhus is a rickettsial disease, whose course resembles that of louseborne typhus, but is milder. Variable onset, often sudden and marked by headache, chills, prostration, fever and general pains. A macular eruption appears on the fifth to sixth day, initially on the upper trunk, followed by spread to the entire body, but usually not to the face, palms or soles. Toxemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever. The case-fatality rate for all ages is less than 1% but increases with age. Absence of louse infestation, geographic and seasonal distribution and sporadic occurrence of the disease help to differentiate it from louseborne typhus. *Confirmed:* Clinically compatible case with level one lab results *Probable:* Clinically compatible case with level two lab results Note: In South Texas areas where murine typhus is endemic, clinically compatible cases with IgM titers of >1:1024 are considered confirmed cases. IgG results alone will not be considered.	*Level One Criteria:* ▪ Fourfold or greater rise in antibody titer to *Rickettsia typhi* or *Rickettsia felis* antigen by IFA, complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – or convalescent – phase specimens ideally taken at least 3 weeks apart, or ▪ Positive PCR assay to *R. typhi* or *R. felis,* or ▪ Demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), or ▪ Isolation of *R. typhi* or *R. felis* from clinical specimen *Level Two Criteria:* ▪ IFA serologic titer of >128 or a single CF of >16 or other supportive serology (fourfold rise in titer or a single titer >128 by an LA, IHA, or MA test)
Typhus fever, **(epidemic louseborne, R. prowazekii)**[2] 10265	A rickettsial disease with variable onset; often sudden and marked by headache, chills, prostration, fever and general pains. A macular eruption appears on the 5th to 6th day, initially on the upper trunk, followed by spread to the entire body, but usually not to the face, palms or soles. The eruption is often difficult to observe on black skin. Toxaemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever. *Confirmed:* Clinically compatible case with level one lab results *Probable:* Clinically compatible case with level two lab results Note: The IF test is most commonly used for laboratory confirmation, but it does not discriminate between louse-borne and murine typhus unless the sera are differentially absorbed with the respective rickettsial antigen prior to testing. Other diagnostic methods are EIA, PCR, immunohistochemical staining of tissues, CF with group-specific or washed type-specific rickettsial antigens, and the toxin-neutralization test. Sending lice to a reference laboratory for PCR testing may help detect an outbreak. Antibody tests usually become positive in the second week.	*Level One Criteria:* ▪ Fourfold or greater rise in antibody titer to *Rickettsia prowazekii* antigen by IFA, complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – or convalescent – phase specimens ideally taken at least 3 weeks apart, or ▪ Positive PCR assay to *R. prowazekii, or* ▪ Demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), or ▪ Isolation of *R. prowazekii* from clinical specimen *Level Two Criteria:* ▪ IFA serologic titer of >128 or a single CF of >16 or other supportive serology (fourfold rise in titer or a single titer >128 by an LA, IHA, or MA test)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Vancomycin Resistant *Enterococcocus* (VRE)[21] 11645	Enteroccocci are bacteria that are normally present in the human intestines and in the female genital tract and are often found in the environment. These bacteria can sometimes cause infections. Vancomycin is an antibiotic that is often used to treat infections caused by enterococci. In some instances, enterococci have become resistant to this drug and thus are called vancomycin-resistant enterococci (VRE). Most VRE infections occur in hospitals. *Confirmed*: A clinically compatible case that is laboratory confirmed	▪ Screening for VRE can be accomplished in a number of ways. For inoculating peri-rectal/anal swabs or stool specimens directly, one method uses bile esculin azide agar plates containing 6 µg/ml of vancomycin. Black colonies should be identified as an enterococcus to species level and further confirmed as vancomycin resistant by an MIC method before reporting as VRE. ▪ Vancomycin resistance can be determined for enterococcal colonies available in pure culture by inoculating a suspension of the organism onto a commercially available brain heart infusion agar (BHIA) plate containing 6 µg/ml vancomycin. The National Committee for Clinical Laboratory Standards (NCCLS) recommends performing a vancomycin MIC test and also motility and pigment production tests to distinguish species with acquired resistance (vanA and vanB) from those with vanC intrinsic resistance ▪ Molecular typing of enterococci in outbreak situations is commonly performed by PFGE. Banding patterns produced by each organism are matched, and this information is combined with epidemiologic data to determine relatedness between strains. Other molecular typing systems include PCR-based typing methods, multilocus enzyme electrophoresis, and ribotyping.
Varicella[7] 10030	An illness with acute onset of diffuse (generalized) papulovesicular rash without other apparent cause. In vaccinated persons who develop varicella more than 42 days after vaccination (breakthrough disease), the disease is almost always mild with fewer than 50 skin lesions and shorter duration of illness. The rash may also be atypical in appearance (maculopapular with few or no vesicles). *Confirmed:* A case that meets the clinical case definition with or without laboratory confirmation	▪ Isolation of varicella-zoster virus (VZV) from a clinical specimen, or ▪ Direct fluorescent antibody (DFA), or ▪ Polymerase chain reaction (PCR), or ▪ Significant rise in serum varicella immunolglobulin G (IgG) antibody level by any standard serologic assay

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Vibrio parahaemolyticus[1,2] 11541	An intestinal disorder characterized by watery diarrhea and abdominal cramps in the majority of cases, and sometimes with nausea, vomiting, fever and headache. Occasionally, a dysentery-like illness is observed with bloody or mucoid stools, high fever and high WBC count. Typically, it is a disease of moderate severity lasting 1-7 days; systemic infection and death rarely occur. *Confirmed*: A case that meets the laboratory criteria for diagnosis *Probable*: A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case	▪ Isolation of *Vibrio parahaemolyticus* from a clinical specimen, or ▪ Identification of 10^5 or more organisms per gram of an epidemiologically incriminated food (usually seafood) Note: For *Vibrio cholerae* isolates, see Cholera
***Vibrio* spp., non-toxigenic, other or unspecified**[1] 11540	An infection of variable severity characterized by diarrhea and vomiting, primary septicemia, or wound infections. Asymptomatic infections may occur, and the organism may cause extraintestional infections *Confirmed*: A case that meets the laboratory criteria for diagnosis *Probable*: A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case	▪ Isolation of *Vibrio* spp. other than *V. parahaemolyticus, V. vulnificus*, and toxigenic *Vibrio cholerae* O1 or O139** from a clinical specimen, or ▪ Identification of 10^5 or more organisms per gram of an epidemiologically incriminated food (usually seafood) Note: For *Vibrio cholerae* isolates, see Cholera
Vibrio vulnificus[1,2] 11542	Infection with *Vibrio vulnificus* produces septicemia in persons with chronic liver disease, chronic alcoholism or hemochromatosis; or those who are immunosuppressed. The disease appears 12 hours to 3 days after eating raw or undercooked seafood, especially oysters. One third of patients are in shock when they present for care or develop hypotension within 12 hours after hospital admission. Three quarters of patients have distinctive bullous skin lesions; thrombocytopenia is common and there is often evidence of disseminated intravascular coagulation. *V. vulnificus* can also infect wounds sustained in coastal or estuarine waters; wounds range from mild, self-limited lesions to rapidly progressive cellulitis and myositis that can mimic clostridial myonecrosis in the rapidity of spread and destructiveness. *Confirmed*: A case that meets the laboratory criteria for diagnosis *Probable*: A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case	▪ Isolation of *Vibrio vulnificus* from a clinical specimen, or ▪ Identification of 10^5 or more organisms per gram of an epidemiologically incriminated food (usually seafood) Note: For *Vibrio cholerae* isolates, see Cholera
Viral Hemorrhagic Fever[1] (See **Ebola**)	See Case Definition/Case Classification for Ebola (the only viral hemorrhagic fever that currently has a condition code)	See Lab Confirmation Test for Ebola (the only viral hemorrhagic fever that currently has a condition code)

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
West Nile fever[1] 10049	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Test for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
Yellow fever[1] 10660	A mosquito-borne viral illness characterized by acute onset and constitutional symptoms followed by a brief remission and a recurrence of fever, hepatitis, albuminuria, and symptoms and, in some instances, renal failure, shock, and generalized hemorrhages. *Confirmed*: A clinically compatible case that is laboratory confirmed *Probable*: A clinically compatible case with supportive serology (stable elevated antibody titer to yellow fever virus [e.g., greater than or equal to 32 by complement fixation, greater than or equal to 256 by immunofluorescence assay, greater than or equal to 320 by hemagglutination inhibition, greater than or equal to 160 by neutralization, or a positive serologic result by immunoglobulin M-capture enzyme immunoassay]). Cross-reactive serologic reactions to other flaviviruses must be excluded, and the patient must not have a history of yellow fever vaccination.	▪ Fourfold or greater rise in yellow fever antibody titer in a patient who has no history of recent yellow fever vaccination and cross-reactions to other flaviviruses have been excluded, or ▪ Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other body fluid
Yersiniosis[2] (Also see **Plague**) 11565	An illness characterized by diarrhea (sometimes bloody), fever, and abdominal pain; an appendicitis-like syndrome and systemic infections may occur. *Confirmed:* A case that meets the laboratory criteria for diagnosis *Probable:* A clinically compatible case that is epidemiologically linked to a confirmed case	▪ Isolation of *Yersinia* (except *Y. pestis*)* in a clinical specimen **Y. pestis* is reportable as Plague

The case definitions and criteria are partially or fully taken from the following sources as noted:
[1] Centers for Disease Control and Prevention web (H*http://www.cdc.gov/epo/dphsi/casedef/case_definitions.htm#CH*)
[2] Heymann DL. *Control of Communicable Diseases Manual*, 18th ed. Washington, DC: American Public Health Association; 2004
[3] CDC Clinical Description updated May 2006, *Hhttp://www.cdc.gov/healthypets/diseases/catscratch.htmH*
[4] Texas DSHS, IDCU, *Creutzfeldt Jakob Disease (CJD) FAQ* at H*http://www.dshs.state.tx.us/idcu/disease/creutzfeldt-jakob/faqs/H*
[5] WHO Recommended Surveillance Standards, 2nd ed: pp 35-37 at H*http://www.who.int/csr/resources/publications/surveillance/whocdscsrisr992.pdfH*
[6] CDC, Parasitic Disease Information at H*www.cdc.gov/ncidod/dpd/parasites/cysticercosisH*
[7] Vaccine-Preventable Disease Guidelines: H*http://www.dshs.state.tx.us/idcu/health/vaccine_preventable_diseases/resources/vpd_guide.pdf*H
[8] CDC, *Group B Strep Prevention*, General Public, *FAQs* and *Adult Disease*, *Hhttp://www.cdc.gov/groupbstrepH*

[9] *Perinatal Hepatitis C appendix* in the *DSHS Perinatal Hepatitis B Prevention Manual* for cases in children less than 2 years of age
[10] CDC, *Key Facts about Influenza and the Influenza Vaccine* at H*http://www.cdc.gov/flu/keyfacts.htmH*
[11] National Center for Infectious Diseases Respiratory and Enteric Viruses Branch, *Norovirus, Technical Fact Sheet* at H*http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-factsheet.htmH*
[12] Mandell GL, Bennet JE, Dolin R, eds. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 6th ed. Philadelphia, USA: Elsevier Churchill Livingstone, 2005:3111-3119
[13] CDC Division of Bacterial and Mycotic diseases: *Hhttp://www.cdc.gov/ncidod/dbmd/diseaseinfo/scarletfever_g.htm#whatisH*
[14] *Severe Acute Respiratory Syndrome (SARS), Appendix B1: Revised CSTE SARS Surveillance Case Definition* at *Hhttp://www.cdc.gov/ncidod/sars/guidance/b/app1.htmH*
[15] *Severe Acute Respiratory Syndrome (SARS*), *Appendix F8—Guidelines for Laboratory Diagnosis of SARS-CoV Infection* at *Hhttp://www.cdc.gov/ncidod/sars/guidance/f/app8.htmH*
[16] *Family Practice Notebook Hhttp://www.fpnotebook.com/ID26.htmH*
[17] University of Texas Medical School, Medical Education Information Center (MEdIC), *Streptococcus, Hhttp://medic.med.uth.tmc.edu/path/00001457.htmH*
[18] Bhally H, Casey K, Endogenous Endophthalmitis Secondary to Streptococcus Group C Infection. *Infect Med.* 2004; 21(3):128-130.
[19] *CDC*, Emerging Infectious Diseases, Group G Streptococcal Bacteremia in Jerusalem, *Hhttp://www.cdc.gov/ncidod/EID/vol10no8/03-0840.htmH*
[20] *DPDx, CDC Division of Parasitic Diseases (DPD) Hhttp://www.dpd.cdc.gov/dpdx/HTML/Toxoplasmosis.htmH*
[21] CDC Infection Control Hhttp://www.cdc.gov/ncidod/dhqp/ar_vre.htmlH

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